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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/690,920	10/22/2003	Donald E. Mosing	FRK-102	6867
21897	7590	11/12/2004	EXAMINER	
			NICHOLSON, ERIC K	
		ART UNIT		PAPER NUMBER
		3679		

DATE MAILED: 11/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/690,920	MOSING ET AL.
	Examiner	Art Unit
	Eric K Nicholson	3679

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 8-16-04.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-5,7,9,10,12-15,17-21,23-39,51-61,63-66,68,69,72 and 73 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-5,7,9,10,12-15,17-21,23-39,51-61,63-66,68,69,72 and 73 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10-22-03.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

DETAILED ACTION

Applicant's election with traverse of species 1 in the reply filed on August 16, 2004 is acknowledged. The traversal is on the grounds that the various identified species does not create a patentably distinct species but rather just an alternative embodiment. This is not found persuasive because the identified differences as shown in the figures represent distinctions beyond mere embodiments and that the type of thread profile while being independent of slot and protuberance fabrication remain as patentably distinct species. The requirement is still deemed proper and is therefore made FINAL.

Drawings

The drawings are objected to under 37 C.F.R. § 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the rings attached to the pipes by welding as claimed in claim 6 must be shown or the feature cancelled from the claim. No new matter should be entered.

Claim Rejections –35 USC § 112

Claims 4,12,13,14,17,20,34-36 and 39 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 4, the phrase “such as” renders the scope of the claim indefinite as to what is actually being claimed. In claims 12,13, 35 and 36 it is unclear what the “angle” or “no angle” is being measured against since clearly a protuberance would have some sort of angle. In claims 14,34 and 39 what is meant by the protuberances are “axially pre-loaded”? In claim 17, “the protuberance” lacks proper antecedent basis since a plurality of protuberances have been claimed it is unclear which is being referred to. In claim 20, it is unclear what is meant by “force loaded”?

Claim Rejections – 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,4,5,7,10,12,14,18,20,23,24,25,26,27,29,34,35,37,39,51-55,60,61,63,68,69,72 and 73 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. patent 1,507,877 to Wilson. The Wilson coupling illustrates and teaches a connection for assembly of with a first pipe 16 having a female end 14, a second pipe 12 having a male end 10 wherein the female end has an inner surface and an outer surface and the male end has an inner surface and an outer surface. A first plurality of protuberances 21 circumferentially and longitudinally spaced relative to each other about the inner surface of said female end and a second plurality of protuberances 20 circumferentially and longitudinally spaced relative to each other about the outer surface of said male end. The circumferential spacing forms a circumferential array having at least one longitudinal column on both the inner surface of said female end and the outer surface of said male end. The arrays are aligned such that said plurality of protuberances are accepted by a mating pipe end when said male and female pipe ends move relative to each other for forming a connection and wherein the male and female ends engage upon any

rotation of one pipe relative to the other pipe wherein such rotation causes said protuberances of the male end and said protuberances of the female end to move circumferentially with respect to each other. The male and female ends are attached to the pipes via threads 11 and 15 and the protuberances are produced via an interrupted and tapered screw thread of which the protuberances include a lead angle. Also the connection includes conical abutment surfaces 23,24 at one end of the threads and 25,26 at the other end and further the interrupted threads 20,21 themselves form abutment surfaces with each other. Further, the interrupted thread can be viewed as cam patches wherein the threads are arcuate cams (see figs. 3 and 4) and the protuberances are radially captured as they are covered by the slots and thereby prevent radial expansion of the female end relative to the male end.

Claims 1-5,7,9,10,12-15,17-21,23-39,51-61,63-66,68,69,72 and 73 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. patent 6,283,511 to Kamp. The Kamp coupling illustrates and teaches a connection for assembly of with a first pipe 52 having a female end 54, a second pipe 2 having a male end 9 wherein the female end has an inner surface and an outer surface and the male end has an inner surface and an outer surface. A first plurality of protuberances 70-77

circumferentially and longitudinally spaced relative to each other about the inner surface of said female end and a second plurality of protuberances 5 circumferentially and longitudinally spaced relative to each other about the outer surface of said male end. As noted on column 5, lines 64-67 continuing to column 6, lines 1-5 the columns can be odd (three) or even (two) or "other numbers of columns can be provided". The circumferential spacing forms a circumferential array having at least one longitudinal column on both the inner surface of said female end and the outer surface of said male end. The arrays are aligned such that said plurality of protuberances are accepted by a mating pipe end when said male and female pipe ends move relative to each other for forming a connection and wherein the male and female ends engage upon any rotation of one pipe relative to the other pipe wherein such rotation causes said protuberances of the male end and said protuberances of the female end to move circumferentially with respect to each other. See column 6-8 which discuss how the connection is made and the various shapes and angles to which the slots and protuberances can be made. The protuberances are produced via an interrupted and straight screw thread of which the protuberances include a lead angle. Also the connection includes abutment surfaces 7,57 at one end of the threads and 20,86 at the other end and further the interrupted threads as illustrated in figs. 6 and 7 themselves form abutment

surfaces with each other. Further, the interrupted thread can be viewed as cam patches wherein the threads are arcuate cams that extend around the circumference of the round male and female members. As to claim 38 the degree of rotation merely depends on the number of columns and/or the length of the slots and protuberances and since the Kamp coupling is clear that such features can be varied as needed or desired it is clear that Kamp thus anticipates the 20 degree ranges prescribed by claim 38 as such a range would fall well within a coupling with a high number of columns of slots and protuberances. See surfaces 35 and 85 which engage limit rotation (column 11, lines 1-20). Further, the protuberances are radially captured as they are covered by the slots and thereby prevent radial expansion of the female end relative to the male end.

Claims 1,4-6,12,13,14,37,38 and 39 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. patent 4,185,856 to McCaskill. The McCaskill coupling illustrates and teaches a connection for assembly of with a first pipe 20 welded to a female end 70, a second pipe 23 welded to a male end 60 wherein the female end has an inner surface and an outer surface and the male end has an inner surface and an outer surface. As shown in fig. 2 a first plurality of protuberances 76 circumferentially and longitudinally spaced relative to each other about the inner

surface of said female end and a second plurality of protuberances 66 circumferentially and longitudinally spaced relative to each other about the outer surface of said male end. The circumferential spacing forms a circumferential array having at least one longitudinal column on both the inner surface of said female end and the outer surface of said male end. The arrays are aligned such that said plurality of protuberances are accepted by a mating pipe end when said male and female pipe ends move relative to each other for forming a connection and wherein the male and female ends engage upon any rotation of one pipe relative to the other pipe wherein such rotation causes said protuberances of the male end and said protuberances of the female end to move circumferentially with respect to each other. As to claim 38 the degree of rotation merely depends on the number of columns and/or the length of the slots and protuberances and since the coupling shows a large number of slots and protuberances it is clear that the coupling thus anticipates the 20 degree ranges prescribed by claim 38 as such a range would fall well within a coupling with a high number of columns of slots and protuberances.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Nicholson whose telephone number is (703) 308-0829. The examiner can normally be reached on Tuesdays thru Fridays from 7:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola, can be reached on (703) 308-2686. The fax phone number for Technology Center 3600 is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center receptionist whose telephone number is (703) 308-1113.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

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11/4/04



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